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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/311,885	05/14/1999	JUNICHI SEKI	35.C13518	1854

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EXAMINER

ROY, SIKHA

ART UNIT	PAPER NUMBER
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2879

DATE MAILED: 07/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/311,885

Applicant(s)

SEKI, JUNICHI

Examiner

Sikha Roy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 March 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) _____ is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

The Amendment, filed on March 27, 2003 has been entered and is acknowledged by the Examiner.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9 –16, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-320496 to Masahiro.

Regarding claim 9 Masahiro discloses (please see Abstract in English, Figs 1 and 3) an image forming apparatus 10 comprising an envelope including first (rear plate 3) and second substrates (faceplate 2) and a frame 4 disposed between first and second substrates within the envelope forming a clearance, an electron emitting device disposed on the first substrate, an image forming member 20 (fluorescent substance) disposed on the second substrate forming an image responsive to an irradiation with an electron emitted from the electron emitting device and a substrate 6 mounted outside the rear plate provided with heaters in a region outside the electron emission region of image-formation, generating heat and preventing thermal strain in the apparatus. Masahiro discloses thermal strain is produced by the generation of heat by electron emission inside the image forming apparatus producing deformation and is prevented by equalization of the temperature distribution by the heating means.

Claim 9 differs from Masahiro in that Masahiro does not exemplify a heat insulating member suppressing thermal leakage. It would have been obvious to one of ordinary skill in the art at the time of invention to specify the substrate 6 of Masahiro as heat insulating member which by providing heat to the first substrate prevents thermal strain generated due to uneven temperatures inside the apparatus. This inclusion of the heat insulation (heating) member produces uniform temperature and hence intrinsically suppresses thermal leakage of the heat generated by the envelope.

Regarding claim 10 Masahiro discloses the claimed invention except for the limitation of heat insulating member disposed on both first and second substrates. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time of invention to include the heat insulating member on both the first and second substrates, since mere duplication of essential parts of the invention is considered within the skill of the art.

Claims 11 and 12 essentially recite the same limitation as of claim 9 and hence are rejected for the same reason.

Regarding claims 13 and 16 Masahiro discloses (Fig.7) the image forming apparatus further comprising heat dissipating means (radiation fins) disposed on the surface region of first substrate.

Regarding claim 15 Masahiro discloses the claimed invention except that the heat dissipating means disposed on the second substrate. It has been held that rearrangement of the essential working parts of a device involves only routine skill in the

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art. It would have been obvious to one having ordinary skill in the art at the time of invention to provide the heat dissipating member on the second substrate, since rearrangement of essential parts of the invention is considered within the skill of the art.

Regarding claim 14 Masahiro discloses the claimed invention except for the limitation of heat dissipating member disposed on both first and second substrates. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time of invention to include the heat dissipating member on both the first and second substrates, since mere duplication of essential parts of the invention is considered within the skill of the art.

Regarding claim 21 Masahiro does not disclose the heat insulating member having a thermal conductivity smaller than the envelope.

The selection of known materials for a known purpose is generally considered to be within the skill of art. It would have been obvious to one of ordinary skill in the art at the time of invention to modify the substrate of Masahiro by an insulating material such as Pyrex having thermal conductivity smaller than that of the envelope because the selection of known material for a known purpose is within the skill of the art.

Claims 17-20, 22-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 09-320496 to Masahiro and in view of U. S. Patent 5,869,919 to Sato et al.

Regarding claims 17-20, 22-25 Masahiro does not exemplify a heat conducting member disposed between the exterior surface of the envelope and heat insulating member.

Sato et al. in analogous art of flat panel displays disclose (column 5 lines 5-20) the thermal distribution pattern for the display panel can be further improved by covering the face plate with a transparent thermally conductive member.

Therefore it would have been obvious to one of ordinary skill in the art at the time of invention to include a heat conducting member as suggested by Sato et al. on the outside surface of the first substrate of the image forming apparatus of Masahiro for improving the thermal distribution pattern for the display panel.

Regarding claim 18 Masahiro in view of Sato et al. disclose the claimed invention except for the limitation of heat conducting member disposed on both first and second substrates. It has been held that mere duplication of the essential working parts of a device involves only routine skill in the art. It would have been obvious to one having ordinary skill in the art at the time of invention to include the heat conducting member on both the first and second substrates, since mere duplication of essential parts of the invention is considered within the skill of the art.

Referring to claims 22-25 Sato et al. disclose (column 5 lines 17-20) the heat conducting member made of metal such as Cu or Al which has thermal conductivity larger than that of the envelope.

Response to Arguments

Applicant's arguments filed March 27, 2003 with respect to claims 9 and 10 have been considered but they are not persuasive.

In response to applicant's argument regarding claims 9 and 10 that Masahiro does not teach suppressing heat leakage generated by the envelope itself, the Examiner respectfully disagrees. It is elementary that mere recitation of a newly discovered function or property, intrinsically possessed by things in the prior art, does not cause a claim drawn to distinguish over the prior art. Additionally, where the Patent Office has reason to believe that a functional limitation asserted to be critical for establishing novelty in the claimed subject matter may, in fact, be an intrinsic characteristic of the prior art, it possesses the authority to require the applicant to prove that the subject matter shown to be in the prior art does not possess the characteristic relied on. The insulating (heating) member by providing heat to the first substrate prevents thermal strain generated due to uneven temperatures inside the apparatus. This inclusion of the heat insulation (heating) member produces uniform temperature and hence intrinsically suppresses thermal leakage of the heat generated by the envelope. Thus, the functional limitation of 'suppressing a thermal leakage of heat generated by the envelope' is taught by Masahiro under intrinsic functional principles.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sikha Roy whose telephone number is (703) 308-2826. The examiner can normally be reached on Monday-Friday 8:00 a.m. – 4:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

S.R.

Sikha Roy
Patent Examiner
Art Unit 2879


ASHOK PATEL
PRIMARY EXAMINER